The Ohio State University
Department of Orthopaedics

Residency Curriculum

General
Orthopaedics/Prison
About This Curriculum

- It is the responsibility of both the resident and the attending to go over the goals and guidelines included in this handbook
  - At the beginning of the rotation
  - At the conclusion of the rotation

- Additional materials and/or service handbooks may be provided by the attendings at the beginning of the rotation
The Ohio State University  
Department of Orthopaedics  
Orthopaedic Residency Program  

**General Orthopaedics and Prison Service Information – OSU**

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**Schedule**

**Dr. Granger**

Monday: OR at OSU Main beginning at 7:30 AM. Typically outpatient cases on inmates such as knee arthroscopy or hardware removal. Clinic at Morehouse beginning at 12:15 PM.

Tuesday: OR at OSU Main beginning at 7:30 AM. Our big day of the week for prisoners or for non-inmate cases which require the special services of OSUH. Dr. Granger typically staffs total joint cases. Sometimes there are inmate Sports cases with Jones or Flanigan.

Wednesday: OR at OSU East beginning at 7 AM for non-inmate general orthopedic cases.

Thursday: CMC clinic begins at 7:15 AM. Dr. Granger rounds on the inpatient ward with the junior resident or a mid-level (if available) while the senior resident supervises the clinic. The clinic should end by 3 PM to avoid expensive overtime for the CO's. We then return to the Morehouse building to complete our surgery applications and to have one hour or more of didactic teaching. This includes review of indications for the patients signed up for surgery that day as well as those for the coming week. The senior resident should assign readings for all members of the service based on these upcoming cases.

Friday: the mornings are free for the scheduled teaching conferences. One Friday a month Dr. Bishop has OR time starting late morning. Clinic at Morehouse beginning at 12:15 PM.
A general orthopaedic service is a compilation of the orthopaedic subspecialties and when a particular problem requires particular expertise a subspecialist is consulted for assistance and if necessary performance of surgery. Otherwise the general orthopaedist manages all problems in his purview. A good general orthopaedist recognizes his limitations however few or many they may be.

The Prison Service is quite clearly a general orthopaedic service and provides a diversity of orthopaedic problems many of which are otherwise seen only in the orthopaedic textbook. The problems in this population include intense athletic competition, the need for survival and self protection, the lack of pre-incarceration treatment for musculoskeletal problems because of socio-economic deprivation, and the failure to identify acute problems until they become chronic. The prison population includes all ages and both sexes which mirrors the outside population in general.

In 1987 the Ohio State University Medical Center agreed to provide medical care for the state penal population. This population now includes 50,000 individuals more or less and is housed in 24 prison institutions throughout the state. Each institution has a full time physician and many have contractual arrangements with a podiatrist. The overseer of this system is the Ohio Department of Rehabilitation and Correction (ODRC). For decorum the population consists of inmates (not prisoners) and their caretakers are Correctional Officers (CO’s, not guards). The contract between OSU and ODRC provides invaluable training experience for our orthopaedic resident inmates.

On Thursday of each week inmates are brought by bus from all over the state to the Corrections Medical Center (CMC) on Columbus’ south side off Frank Road. Typically there are from 50 to 90 individuals in this general orthopaedic clinic for initial evaluation, follow-up treatment, and post operative care. The clinic is not popular with the inmates. The Corrections Medical Center is a maximum security facility. Attendance at the clinic means a 4 a.m. wake-up, all day in handcuffs and shackles, close quarter cells and busses. Generally the inmates need and/or want to be there for medical reasons. Overseeing the clinic is a senior resident and an attending. Elective surgery for inmates is on Monday morning and Tuesday.

Each physician-patient (inmate) encounter is in the form of a consultation. No orders are written. When signing an inmate for surgery please be accurate and consistent about the site of surgery and include a copy of the imaging that supports the diagnosis. This matter has caused more problems in the past than you can imagine. Your printed name beneath your signature-flourish may prevent hours of agony. Applications for surgery should be completed at the CMC or the Morehouse clinic by the end of the day. They should include an ICD-9 and CPT code for the procedure as well as designation of the attending or group of attendings to supervise the case. Any special equipment needs should be noted. There is a convenient form for this. Most elective cases which you sign-up will be done by residents who subsequently rotate on the service so it is important to be clear about the surgical indication in the procedure that is planned.

Medical liability is an issue between an inmate and the state. You personally are at no risk. The inmate population is generally interesting and challenging. You will have an opportunity to practice your skills and probably find some of your deficiencies and maybe even some talents.

In addition to the ODRC inmates the service has responsibility for non-inmate general orthopedic cases in the outpatient clinic at the Morehouse building and at OSU Main and East hospitals. We see common musculoskeletal conditions in OSU employees and retirees as well as referral cases
from around the state. Recently this has included a high-volume of primary and revision total joint replacement. The chief resident is responsible for ensuring staffing of the clinic and supervising the junior resident and medical students. It is a chance for him or her to do a large volume and wide variety of cases approximating entry into post-residency practice. It is also an opportunity to exhibit the practice management skills he or she will need on the outside by skillfully managing personnel, OR time and equipment.
I. Resident Responsibilities for Patient Care

Rounding  Residents are expected to have seen and written a complete and detailed note on each patient prior to going to OR. Consultation patients should be seen as soon as possible and should be seen in person with attending staff within 24 hours. After that they will be followed based on acuity to be decided upon after discussion between the attending staff in the resident. Attending rounds will be done daily and a time to be discussed between residents and attending staff.

II. Resident Level of Responsibility for Patient Care

Resident rotations are structured so that the residents have a one-on-one relationship with attendings. The level of responsibility given by the attending to the resident is determined by that attending, depending on the attendings’ assessment of the resident’s knowledge and skills, and the complexity of the procedure.

III. Resident Supervision

Attendings are responsible for the direct supervision of residents in both the clinic and the operating room, as well as in on-call situations. Attending physicians are available for consultation at all times.

Senior residents (PGY4 and above) are also directly responsible for the supervision of junior residents (PGY1, PGY2, and PGY3). This applies to all of the above situations (i.e. on-call, in clinic, in the OR). Senior residents must be available for consultation at all times. Ultimately, chief residents (all PGY5’s) are responsible for the supervision of all residents, regardless of PGY year.

III. Performance Feedback

Both attending staff members are available at any time if questions or concerns arise. At the end of each rotation, each attending on the service will evaluate each resident assigned to the service. A meeting should be scheduled at the conclusion of the rotation to discuss performance and provide written feedback on the rotation. An operative note dictation will be reviewed.
Goals and Objectives
General Orthopaedics/Prison Rotation – PGY2

I. Core Competency Areas

By the end of the PGY2 rotation in General Orthopedics, the resident should demonstrate progress towards obtaining excellence in each of the following core competency areas.

Patient Care

1. Demonstration of caring and respectful behaviors when interacting with patients and families
2. Procurement of thorough, logical, and concise patient histories with an emphasis on the musculoskeletal system
3. Responsiveness to the individual needs of patients and their families
4. Performance of physical examinations that are accurate, comprehensive, and directed to patient’s problems. This applies to the clinic, emergency department, and in-patient settings.
5. Integration of medical facts and clinical data as the basis for diagnosis
6. Evaluation of risks, benefits, and alternative treatments
7. Formulation and carry out of a complete and effective treatment plan (operative and non-operative)
8. Counsel of patient and family in treatment procedure, options, and potential outcomes
9. Dissemination of education and services to the patient which are aimed at preventing treatment complications and maintaining health
10. Understanding of and performance of medical procedures related to treatment plan
11. Ability to work well with entire team of health care professionals and be involved in care of the patient

Medical Knowledge

1. Exhibition of a fund of medical knowledge that is up-to-date and ability to cite literature appropriately
2. Investigation of topics as needed for clinical assignments
3. Understanding and use of basic science principles as related to medical practice

Practice-Based Learning

1. Assessment of ones own patient management skills and ability to make appropriate changes in practice
2. Integration of evidence from scientific studies in the care of patient’s problems
3. Demonstration of knowledge of study designs and statistical methods in order to evaluate scientific studies
4. Usage of available information technology to obtain and manage information
5. Willingness to take time to educate students and other health care professionals

Interpersonal Skills

1. Fostering of a compassionate, therapeutic relationship with patients and their families
2. Ability to listen to patients and include them in treatment decisions
3. Ability to listen to information provided by other members of the health care team

Professionalism

1. Respectfulness of patient wishes and ability to provide adequate counseling, education, and informed consent instructions to patients
2. Demonstration of an ethically sound practice of medicine
3. Demonstration of sensitivity to cultural, age, gender, and disability issues among patients

Systems-Based Practice
1. Knowledge of how to provide cost-effective care
2. Willingness to advocate for patients within the health care system
3. Referral of patient to appropriate practitioners and agencies within the health care system
4. Accessing of consultants appropriately and use of their assistance in the management of ongoing care

II. Specialty Specific Knowledge

*By the end of the PGY2 rotation in General Orthopaedics, the resident should:*

1. Know the appropriate local anesthesia or conscious sedation for the safety and comfort of the patient during emergency room orthopaedic procedures.
2. Understand the necessary elements of the examination of the orthopaedic patient in the office or clinic setting, including the elicitation of an appropriate history, physical examination techniques, imaging studies, and necessary laboratory studies.
3. Understand the treatment options available to the patient based on pertinent findings of the patient assessment.
4. Understand the short and long term outpatient follow-up for patients as appropriate to their conditions.
5. Understand the limits of his or her own knowledge, of the available facilities in managing orthopaedic patients, and arrange consultation with more experienced or specialized personnel and appropriate facilities as needed.

II. Specialty Specific Psychomotor Skills

*By the end of the PGY2 rotation in General Orthopaedics, the resident should be able to:*

1. Demonstrate the ability to effectively manage the responsibilities of call duty.
2. Demonstrate the assessment and management of orthopaedic injuries and illnesses commonly encountered in the emergency room, including appropriate physical and imaging examinations, recognition of important features of the condition, and the appropriate type of procedure required for initial treatment.
3. Demonstrate the manual techniques for initial management of commonly encountered orthopaedic and hand problems in the emergency room (i.e. reduction of fractures and dislocations, treatment of lacerations involving joint or tendon, examination of soft tissue injuries of joint or muscle, and aspiration of joint or fluid collection.
4. Demonstrate appropriate immobilization and dressing techniques for commonly encountered orthopaedic problems.
5. Evaluate emergency room patients and effectively triage patients having injuries of illnesses that are considered to be orthopaedic emergencies (i.e. acute or imminent septic disease, infections, open fractures, compartment syndrome, etc.)
6. Demonstrate physical examination techniques appropriate to the patient’s chief complaint and history, and arrange further studies as needed.
7. Perform a basic interpretation of imaging and laboratory study findings in the context of the patient’s history and examination.
8. Demonstrate the appropriate pre-operative work-up of orthopaedic patients, including the appropriate problem-focused orthopaedic physical examination, functional assessment, and imaging studies.
9. Perform an appropriate screening pre-operative history and physical examination, and refer for further studies as needed for pre-operative clearance for the procedure in question.
10. Participate in the definitive management, including surgical intervention when appropriate, of conditions commonly encountered by the general orthopaedist (i.e. traumatic injuries of the spine and extremities, arthritic conditions involving the spine and extremities, orthopaedic infections, acute and chronic athletic injuries involving bone, muscle, ligament, and tendons).
11. Evaluate and determine appropriate interventions for the orthopaedic and post-operative issues that arise in the care of post-operative patients (i.e. pain control, bleeding and drainage, fevers, traction and post operative stabilization)
12. Recommend and arrange as necessary, appropriate post-operative of post-procedure care, including pain control, activity status including immobilization and/or therapeutic exercise, wound management and appropriate nursing or custodial care for orthopaedic patients upon discharge.
Goals and Objectives
General Orthopaedics/Prison Rotation – PGY5

I. Core Competency Areas

By the end of the PGY5 rotation in General Orthopaedics, the resident should demonstrate excellence in each of the following core competency areas.

Patient Care

1. Demonstration of caring and respectful behaviors when interacting with patients and families
2. Procurement of thorough, logical, and concise patient histories with an emphasis on the musculoskeletal system
3. Responsiveness to the individual needs of patients and their families
4. Performance of physical examinations that are accurate, comprehensive, and directed to patient’s problems. This applies to the clinic, emergency department, and in-patient settings.
5. Integration of medical facts and clinical data as the basis for diagnosis
6. Evaluation of risks, benefits, and alternative treatments
7. Formulation and carry out of a complete and effective treatment plan (operative and non-operative)
8. Counsel of patient and family in treatment procedure, options, and potential outcomes
9. Dissemination of education and services to the patient which are aimed at preventing treatment complications and maintaining health
10. Understanding of and performance of medical procedures related to treatment plan
11. Ability to work well with entire team of health care professionals and be involved in care of the patient

Medical Knowledge

1. Exhibition of a fund of medical knowledge that is up-to-date and ability to cite literature appropriately
2. Investigation of topics as needed for clinical assignments
3. Understanding and use of basic science principles as related to medical practice

Practice-Based Learning

1. Assessment of ones own patient management skills and ability to make appropriate changes in practice
2. Integration of evidence from scientific studies in the care of patient’s problems
3. Demonstration of knowledge of study designs and statistical methods in order to evaluate scientific studies
4. Usage of available information technology to obtain and manage information
5. Willingness to take time to educate students and other health care professionals

Interpersonal Skills

1. Fostering of a compassionate, therapeutic relationship with patients and their families
2. Ability to listen to patients and include them in treatment decisions
3. Ability to listen to information provided by other members of the health care team

Professionalism

1. Respectfulness of patient wishes and ability to provide adequate counseling, education, and informed consent instructions to patients
2. Demonstration of an ethically sound practice of medicine
3. Demonstration of sensitivity to cultural, age, gender, and disability issues among patients
Systems-Based Practice

1. Knowledge of how to provide cost-effective care
2. Willingness to advocate for patients within the health care system
3. Referral of patient to appropriate practitioners and agencies within the health care system
4. Accessing of consultants appropriately and use of their assistance in the management of ongoing care

II. Specialty Specific Knowledge

Basic:

1. Know the appropriate local anesthesia or conscious sedation for the safety and comfort of the patient during emergency room orthopaedic procedures.
2. Understand the necessary elements of the examination of the orthopaedic patient in the office or clinic setting, including the elicitation of an appropriate history, physical examination techniques, imaging studies, and necessary laboratory studies.
3. Understand the treatment options available to the patient based on pertinent findings of the patient assessment.
4. Understand the short and long term outpatient follow-up for patients as appropriate to their conditions.
5. Understand the limits of his or her own knowledge, of the available facilities in managing orthopaedic patients, and arrange consultation with more experienced or specialized personnel and appropriate facilities as needed.

Advanced: By the end of the PGY5 rotation in General Orthopaedics and building upon the experiences from the PGY2 rotation, the resident should:

6. Know the appropriate local anesthesia or conscious sedation for the safety and comfort of the patient during emergency room orthopaedic procedures.
7. Understand the necessary elements of the examination of the orthopaedic patient in the office or clinic setting, including the elicitation of an appropriate history, physical examination techniques, imaging studies, and necessary laboratory studies.
8. Understand the treatment options (operative and non-operative, where appropriate) available to the patient based on pertinent findings of the patient assessment and be able to explain the pros and cons of the options to the patients and family, and recommend appropriate care of the patient’s condition.
9. Understand the short and long term outpatient follow-up for patients as appropriate to their conditions.
10. Understand the limits of his or her own knowledge, of the available facilities in managing orthopaedic patients, and arrange consultation with more experienced or specialized personnel and appropriate facilities as needed.

III. Specialty Specific Psychomotor Skills

Basic:

1. Demonstrate the ability to effectively manage the responsibilities of call duty.
2. Demonstrate the assessment and management of orthopaedic injuries and illnesses commonly encountered in the emergency room, including appropriate physical and imaging examinations, recognition of important features of the condition, and the appropriate type of procedure required for initial treatment.
3. Demonstrate the manual techniques for initial management of commonly encountered orthopaedic and hand problems in the emergency room (i.e. reduction of fractures and dislocations, treatment of lacerations involving joint or tendon, examination of soft tissue injuries of joint or muscle, and aspiration of joint or fluid collection.
4. Demonstrate appropriate immobilization and dressing techniques for commonly encountered orthopaedic problems.
5. Evaluate emergency room patients and effectively triage patients having injuries of illnesses that are considered to be orthopaedic emergencies (i.e. acute or imminent septic disease, infections, open fractures, compartment syndrome, etc.)
6. Demonstrate physical examination techniques appropriate to the patient’s chief complaint and history, and
   arrange further studies as needed.
7. Perform a basic interpretation of imaging and laboratory study findings in the context of the patient’s history
   and examination.
8. Demonstrate the appropriate pre-operative work-up of orthopaedic patients, including the appropriate problem-
   focussed orthopaedic physical examination, functional assessment, and imaging studies.
9. Perform an appropriate screening pre-operative history and physical examination, and refer for further studies
   as needed for pre-operative clearance for the procedure in question.
10. Participate in the definitive management, including surgical intervention when appropriate, of conditions
    commonly encountered by the general orthopaedist (i.e. traumatic injuries of the spine and extremities,
    arthritic conditions involving the spine and extremities, orthopaedic infections, acute and chronic athletic
    injuries involving bone, muscle, ligament, and tendons).
11. Evaluate and determine appropriate interventions for the orthopaedic and post-operative issues that arise in the
    care of post-operative patients (i.e. pain control, bleeding and drainage, fevers, traction and post operative
    stabilization).
12. Recommend and arrange as necessary, appropriate post-operative of post-procedure care, including pain
    control, activity status including immobilization and/or therapeutic exercise, wound management and
    appropriate nursing or custodial care for orthopaedic patients upon discharge.

**Advanced: By the end of the PGY5 rotation in General Orthopaedics and building upon the experiences from the
PGY2 rotation, the resident should be able to:**

13. Instruct and supervise the junior residents in the performance of the goals and objectives of the junior residents.
14. Instruct and supervise the junior residents in the appropriate techniques for general orthopaedic procedures.
15. Demonstrate the ability to effectively manage the responsibilities of call duty, including supervision and
    instruction of the junior residents.
16. Demonstrate the assessment and management of orthopaedic injuries and illnesses commonly encountered in
    the emergency room, including appropriate physical and imaging examinations, recognition of important
    features of the condition, and the appropriate type of procedure required for initial treatment.
17. Demonstrate the manual techniques for initial management of commonly encountered orthopaedic and hand
    problems in the emergency room (i.e. reduction of fractures and dislocations, treatment of lacerations
    involving joint or tendon, examination of soft tissue injuries of joint or muscle, and aspiration of joint or fluid
    collection.
18. Demonstrate appropriate immobilization and dressing techniques for commonly encountered orthopaedic
    problems.
19. Instruct and consult on the evaluation of emergency room patients and oversee the effective triage patients
    having injuries of illnesses that are considered to be orthopaedic emergencies (i.e. acute or imminent septic
    disease, infections, open fractures, compartment syndrome, etc.)
20. Demonstrate physical examination techniques appropriate to the patient’s chief complaint and history, and
    arrange further studies as needed.
21. Perform a basic interpretation of imaging and laboratory study findings in the context of the patient’s history
    and examination.
22. Demonstrate the appropriate pre-operative work-up of orthopaedic patients, including the appropriate problem-
    focussed orthopaedic physical examination, functional assessment, and imaging studies.
23. Perform an appropriate screening pre-operative history and physical examination, and refer for further studies
    as needed for pre-operative clearance for the procedure in question.
24. Participate in the definitive management, including surgical intervention when appropriate, of conditions
    commonly encountered by the general orthopaedist (i.e. traumatic injuries of the spine and extremities,
    arthritic conditions involving the spine and extremities, orthopaedic infections, acute and chronic athletic
    injuries involving bone, muscle, ligament, and tendons).
25. Evaluate and determine appropriate interventions for the orthopaedic and post-operative issues that arise in the
    care of post-operative patients (i.e. pain control, bleeding and drainage, fevers, traction and post operative
    stabilization).
26. Recommend and arrange as necessary, appropriate post-operative of post-procedure care, including pain control, activity status including immobilization and/or therapeutic exercise, wound management and appropriate nursing or custodial care for orthopaedic patients upon discharge.
Surgical Competencies
General Orthopaedics/Prison Service: PGY2 and PGY5 at OSU

By the end of the PGY2 rotation in General Orthopaedics/Prison, the resident should be able to perform the following procedures:

Core Surgical competencies:

Knee Arthroscopy
- setup and positioning
- standard portals and diagnostic exam
- meniscectomy, removal of loose bodies, chondroplasty and microfracture.
ACL reconstruction with hamstring allograft or autograft

Shoulder Arthroscopy
- setup and positioning
- standard portals and diagnostic exam
- subacromial decompression
- rotator cuff mobilization and repair
- arthroscopic Bankhart repair

Hardware Removal
- positioning and fluoroscopic visualization
- techniques and pitfalls in surgical exposure
- removal of broken screws

Lower Extremity Tendon Ruptures
- quadriceps repair, acute or V-Y plasty
- patellar tendon repair, acute or allograft
- Achilles tendon repair, acute, V-Y or FHL transfer

Total Knee Arthroplasty
- indications and nonarthroplasty options
- CR vs. PS vs. UKA
- surgical approaches
- implant positioning and ligament balancing

Total Hip arthroplasty
- indications
- posterior approach
- acetabular and femoral preparation
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General Orthopaedics/Prison – PGY2 and PGY5

Prison Service Reading List:

1) Campbell’s 11th edition chaps 47,48 (knee basics)  
2) Campbell’s 11th edition chap 49 (shoulder scope basics)  
3) AOA manual (basics of hardware removal)  
4) Campbell’s 11th edition chap 46 (LE tendon ruptures)  
5) Campbell’s 11th edition chap 6 (basics of TKA)  
6) Campbell’s 11th edition chap 7 (basics of THA)

Prison Conference Schedule:

1) Thursdays 3-4 pm: surgical indications/pre-op planning and templating upcoming cases.